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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,729	03/04/2002	Kazuhiro Yoshimoto	020262	2205

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EXAMINER

OSELE, MARK A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,729

Applicant(s)

YOSHIMOTO ET AL.

Examiner

Mark A Osele

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Safabakhsh et al. Safabakhsh et al. shows a method and device for peeling a semiconductor chip from a tape by a peeling device including a plurality of annular contact member, 36, 46, arranged from the outside, 36, to the inside, 46, wherein the contact members are operated to successively peel of the tape from an outer circumferential portion toward a central portion (See Figs. 3, 4, 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Safabakhsh et al. in view of Wiesler et al. Wiesler et al. teaches that cams are known for moving push up pins for removing a semiconductor chip from a tape (column 6, lines 10-13). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to use a cam to move the annular contact members of Safabakhsh et al. because Wiesler et al. shows this to be an effective way to convert motor energy to linear motion of push up members in a chip releasing apparatus.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Safabakhsh et al. As shown in paragraph 2 above, Safabakhsh et al. shows all of the claimed features except for a suction device above a frame. The peeling device of Safabakhsh et al. includes a vacuum chamber, 47, within the device which extends inside a top plate, 36, having a hole within which contact members, 46, 39, are arranged. Safabakhsh et al. further shows a suction device, 53, opposite the tape and chip for retaining the chip after it is peeled from the tape. It would have been obvious to one of ordinary skill in the art at the time of the invention to invert the mechanism so that the suction device is above the frame of Safabakhsh et al. because this inverted position is conventional for chip peeling devices. In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to include additional annular contact members within the opening of the top plate when chips are larger and/or more fragile than the chip shown so that the chip is slowly peeled from the tape in more than two stages.

Allowable Subject Matter

6. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art suggests moving all of the contact members simultaneously, stopping the outermost contact member, and simultaneously moving the rest of the contact members.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. European Patent Application 1,304,728 and Teshirogi et al. each show annular lifting and pressing members over an entire semiconductor wafer. Japanese Patent Publication 2000-353710 shows parallel chip push up members from an outside of a chip to the center. Japanese Patent Publications 2-66957 and 62-166536 show push up members on outer edges and the inside segments of chips.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Osele whose telephone number is 703-308-2063. The examiner can normally be reached on Mon-Fri 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read 'Mark A. Osele', written in a cursive style.

**MARK A. OSELE
PRIMARY EXAMINER**

October 1, 2003